ABSTRACT

SYSTEM WITH INTERLEAVER AND DE-INTERLEAVER

Systems (1) with interleavers (2) for interleaving data units and with de-interleavers (3) for de-interleaving data units, are made more efficient and less complex by storing data units in the form of stacks in the memories (29,39) of said interleavers (2) and said de-interleavers (3), by calculating stack positions for data units to be (de)interleaved, and by adapting stacks through shifting before the interleaving or after the de-interleaving. Such a system (1) does not require more than [(N-1)(D-1)]/2 memory elements, the theoretical memory size for the block length N and the interleaving depth D. Said data units are stored at subsequent positions, with said data units at said subsequent positions being adapted through shifting before the interleaving or after the de-interleaving to further subsequent positions. An interleaver (2) comprises a calculator (21), a shifter (23) and an inserter (24). A de-interleaver (3) comprises a calculator (31), an extracter (34) and a shifter (33).

Figure 2